

Appl. No. 09/517,903  
Amendment Dated September 8, 2004  
Reply to Office Action Mailed July 13, 2004

LISTING OF CLAIMS

The listing of claims below replaces all prior versions, and listings, of claims:

- 1        1. (Previously Presented) Apparatus for use in a telephony system, comprising:  
2              a digital interface for connection with a stimulus telephone;  
3              a packet interface for communicating with a packet-based network; and  
4              a controller to receive stimulus control information from the digital interface and  
5              to encapsulate the stimulus control information into one or more packets for transmission over  
6              the packet-based network through the packet interface.
- 1        2. (Original) The apparatus of claim 1, wherein the controller encapsulates the  
2              stimulus control information into an Internet Protocol packet.
- 1        3. (Original) The apparatus of claim 1, wherein the digital interface includes a  
2              UART interface.
- 1        4. (Original) The apparatus of claim 1, wherein the digital interface includes a time  
2              compression multiplex interface.
- 1        5. (Original) The apparatus of claim 1, wherein the controller adds a destination  
2              address of a telephone switch system into the one or more packets.
- 1        6. (Previously Presented) The apparatus of claim 1, wherein the controller adds a  
2              destination address of a second stimulus telephone into the one or more packets.
- 1        7. (Original) The apparatus of claim 1, wherein the stimulus control information is  
2              according to a first stimulus language, and wherein the stimulus control information remains in  
3              the first stimulus language after encapsulation.

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1           8. (Original) The apparatus of claim 1, wherein the controller encapsulates the  
2 stimulus control information without translating the stimulus control information into a different  
3 form.

1           9. (Original) The apparatus of claim 8, wherein the controller encapsulates the  
2 stimulus control information by adding header information according to a network protocol.

1           10. (Original) The apparatus of claim 9, wherein the network protocol header  
2 information includes an Internet Protocol header.

1           11. (Original) The apparatus of claim 9, wherein the controller adds further header  
2 information according to a transport protocol.

1           12. (Original) The apparatus of claim 11, wherein the further header information  
2 includes a User Datagram Protocol header.

1           13. (Original) The apparatus of claim 1, wherein the controller also scrambles the  
2 stimulus message before encapsulation.

1           14. (Original) The apparatus of claim 1, wherein the controller encrypts the one or  
2 more packets.

1           15. (Original) The apparatus of claim 1, further comprising a receiver to receive the  
2 one or more packets, the receiver including an element to decapsulate the one or more packets to  
3 extract the stimulus control information.

1           16. (Original) The apparatus of claim 15, wherein the receiver is associated with a  
2 second stimulus device, and wherein the extracted stimulus control information is in a native  
3 stimulus language of the second stimulus device.

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1           17. (Previously Presented) The apparatus of claim 1, wherein the stimulus control  
2 information includes at least one of hook state information and key press event information, the  
3 controller to encapsulate the at least one of the hook state information and key press event  
4 information into the one or more packets.

1           18. (Previously Presented) The apparatus of claim 1, wherein the stimulus control  
2 information includes a command selected from the group consisting of a handset volume control  
3 command, a handset connect/disconnect command, and a ringer activation command, the  
4 controller to encapsulate the command selected from the group consisting of the handset volume  
5 control command, the handset connect/disconnect command, and the ringer activation command.

1           19. (Cancelled)

1           20. (Previously Presented) A method for use in a telephony system, comprising:  
2                 communicating stimulus control information with a stimulus telephone through a  
3 first interface connected to the stimulus telephone, and packet information with a packet-based  
4 network through a packet interface;  
5                 encapsulating stimulus control information received from the first interface; and  
6                 transmitting the encapsulated stimulus control information as at least one packet  
7 to the packet interface.

1           21. (Previously Presented) The method of claim 20, further comprising:  
2                 decapsulating one or more packets received from the packet interface and  
3 containing stimulus control information; and  
4                 transmitting the stimulus control information of the decapsulated one or more  
5 packets to the first interface.

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1           22. (Original) The method of claim 20, wherein the stimulus control information is in  
2 a native stimulus language, and wherein encapsulating the stimulus control information includes  
3 inserting the stimulus control information in its native stimulus language into a payload of the at  
4 least one packet.

1           23. (Original) The method of claim 22, wherein encapsulating the stimulus control  
2 information includes adding a network protocol header to the stimulus control information.

1           24. (Original) The method of claim 23, wherein encapsulating the stimulus control  
2 information includes adding an Internet Protocol header.

1           25. (Original) The method of claim 24, wherein encapsulating the stimulus control  
2 information further includes adding a User Datagram Protocol header.

1           26. (Original) The method of claim 20, further comprising scrambling the stimulus  
2 control information before encapsulating.

1           27. (Original) The method of claim 20, further comprising encrypting the at least one  
2 packet.

1           28. (Previously Presented) An article including one or more machine-readable storage  
2 media containing instructions for call control in a telephony system, the instructions when  
3 executed causing a device to:

4           receive data according to a stimulus protocol from a first interface connected to a  
5 stimulus telephone;

6           encapsulate the data into one or more packets; and

7           communicate the one or more packets to a packet-based data network.

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1           29. (Original) The article of claim 28, wherein the one or more storage media contain  
2 instructions that when executed causes the device to:

3                 receive a packet containing data according to the stimulus protocol;

4                 decapsulate the packet; and

5                 communicate the data according to the stimulus protocol to the first interface.

1           30. (Previously Presented) A data signal embodied in a carrier wave and containing  
2 instructions for call control in a telephony system, the instructions when executed causing a  
3 device to:

4                 receive at least one packet containing a stimulus message according to a first  
5 language;

6                 decapsulate the at least one packet to extract the stimulus message according to  
7 the first language; and

8                 send the stimulus message according to the first language to a first interface  
9 connected to a stimulus telephone.

1           31. (Previously Presented) The data signal of claim 30, further containing instructions  
2 that when executed causes the device to:

3                 receive a stimulus message according to the first language through the first  
4 interface connected to the stimulus telephone; and

5                 encapsulate the stimulus message according to a first language into at least one  
6 packet.

1           32. (Cancelled)

1           33. (Cancelled)

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1           34. (Previously Presented) An apparatus for use in a telephony system, comprising:  
2               means for receiving a stimulus message through a first interface connected to a  
3               stimulus telephone;  
4               means for encapsulating the stimulus message into at least one packet; and  
5               means for transmitting the at least one packet to a packet-based network.

1           35. (Previously Presented) The apparatus of claim 1, further comprising an interface  
2               card adapted to be inserted into a slot of the stimulus telephone, the interface card comprising the  
3               digital interface, the packet interface, and the controller.

1           36. (Previously Presented) The apparatus of claim 1, wherein the digital interface is  
2               adapted to exchange the stimulus control information with the stimulus telephone.

1           37. (Previously Presented) The apparatus of claim 1, wherein the stimulus control  
2               information contains a command according to a stimulus protocol selected from the group  
3               consisting of off-hook, on-hook, handset volume control, handset connect, and handset  
4               disconnect, the controller to encapsulate the command selected from the group consisting of off-  
5               hook, on-hook, handset volume control, handset connect, and handset disconnect in the one or  
6               more packets.

1           38. (Previously Presented) The apparatus of claim 1, further comprising a receiver to  
2               receive one or more inbound packets containing inbound stimulus control information, the  
3               controller to decapsulate the one or more inbound packets to extract the inbound stimulus control  
4               information.

1           39. (Previously Presented) The apparatus of claim 38, wherein each of the one or  
2               more inbound packets contains a User Datagram Protocol (UDP) port number, the controller to  
3               determine from the UDP port number whether the corresponding inbound packet contains voice  
4               data or stimulus control information.

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1        40. (Previously Presented) The method of claim 20, further comprising providing an  
2 interface card to be inserted into a slot of the stimulus telephone, the interface card having the  
3 first interface and the packet interface,

4                wherein encapsulating the stimulus control information and transmitting the  
5 encapsulated stimulus control information and transmitting the encapsulated stimulus control  
6 information is performed by the interface card.

1        41. (Previously Presented) The method of claim 20, wherein encapsulating the  
2 stimulus control information comprises encapsulating a command according to a stimulus  
3 protocol selected from the group consisting of off-hook, on-hook, handset volume control,  
4 handset connect, and handset disconnect.

1        42. (Previously Presented) The method of claim 21, wherein each of the received one  
2 or more packets contains a User Datagram Protocol (UDP) port number, the method further  
3 comprising determining from the UDP port number whether the corresponding received packet  
4 contains voice data or stimulus control information.

1        43. (Previously Presented) The article of claim 28, wherein encapsulating the data  
2 according to the stimulus protocol comprises encapsulating one of an off-hook stimulus  
3 command, on-hook stimulus command, handset volume control stimulus command, handset  
4 connect stimulus command, and handset disconnect stimulus command.

1        44. (Previously Presented) The data signal of claim 30, wherein receiving the at least  
2 one packet containing the stimulus message comprises receiving the at least one packet  
3 containing stimulus message containing at least a command selected from the group consisting  
4 of off-hook, on-hook, handset volume control, handset connect, and handset disconnect.

1        45. (Previously Presented) The apparatus of claim 34, wherein the stimulus message  
2 contains at least a command selected from the group consisting of off-hook, on-hook, handset

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3       volume control, handset connect, and handset disconnect, the means for encapsulating to  
4       encapsulate the command selected from the group consisting of off-hook, on-hook, handset  
5       volume control, handset connect and handset disconnect.

1           46. (Previously Presented) The apparatus of claim 34, further comprising:  
2               means for decapsulating the at least one packet received from the packet-based  
3       network and containing the stimulus message.

1           47. (Previously Presented) The apparatus of claim 34, further comprising means for  
2       encrypting the at least one packet.

1           48. (Previously Presented) The apparatus of claim 34, further comprising means for  
2       scrambling the stimulus message before encapsulating.

1           49. (Previously Presented) The apparatus of claim 35, wherein the interface card is  
2       adapted to be inserted into a slot of a telephone.

1           50. (Previously Presented) The method of claim 40, wherein providing the interface  
2       card comprises inserting the interface card into a slot of the stimulus telephone.

1           51. (Previously Presented) The apparatus of claim 1, wherein the digital interface is  
2       adapted to communicate with the stimulus telephone through an input/output port of the stimulus  
3       telephone.

1           52. (Previously Presented) The method of claim 20, wherein communicating the  
2       stimulus control information comprises communicating the stimulus control information through  
3       the interface and an input/output port of the stimulus telephone.

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1        53. (Previously Presented) The article of claim 28, wherein receiving the data  
2 according to the stimulus protocol comprises receiving the data according to the stimulus  
3 protocol through the first interface and an input/output port of the stimulus telephone.

1        54. (Previously Presented) The data signal of claim 30, wherein sending the stimulus  
2 message comprises sending the stimulus message to the first interface and an input/output port of  
3 the stimulus telephone.

1        55. (Previously Presented) The apparatus of claim 34, wherein receiving means is for  
2 receiving the stimulus message through the first interface and an input/output port of the stimulus  
3 telephone.